

ACCESS

T B L M A R K E T I N G B I - M O N T H L Y

Issue No. 14

May 2001

TBL gears up for summer projects

In preparation for large infrastructure projects planned for completion by 2006, the Transmission Business Line's construction department is gearing up for a long, hot and busy summer. The infrastructure projects will relieve transmission congestion and integrate new Northwest power plants into the regional transmission system. Construction projects this summer will prepare lines and substations for big work that lays ahead.

To make sure all facilities are ready, TBL is bringing on extra construction crews this summer, including a contractor crew and one new BPA crew, to handle the increased number of system upgrades, according to Dwight Raikoglo, TBL Construction Services Manager. He said BPA crews are being augmented this year by 50 contractors, mainly in the painter, carpenter and equipment operator trades, as well as the new BPA 10-man electrician crew.

"We have a lot of work to finish this summer as we prepare for some of the larger projects that are to begin in the next fiscal year," Raikoglo said. "It is important that we get these done now so we don't cause service interruptions as we connect new generation facilities this fall and next year."

Some of the most immediate projects include integrating this fall the 260 MW Coyote Springs No. 2

[continued on page 7](#)



TBL crews worked hard this spring to integrate Coyote Springs No. 2 generating plant near Hermiston. See additional pictures, p. 7.

In This Issue

page

- TBL gears up for summer projects1
- BPA prepares an emergency load dropping response.....2
- Business practices to change for 2002 tariff.....3
- FERC offers RTO guidance.....4
- Congested paths scrutinized5
- ETMS depends on accurate e-tags.....6

BPA prepares an emergency load dropping response

Drought and the West Coast energy shortage have the Bonneville Power Administration concerned that the Northwest could see something similar to the electricity blackouts that California customers are experiencing this year. While BPA believes it already is taking steps to prevent serious electricity interruptions this summer, it is also working with its customers today to both inform them of its system capabilities and to develop individual load dropping plans.

"BPA is reviewing its emergency preparations to assure that it will be able to respond to transmission emergencies if they should occur," said Chuck Meyer, Transmission Business Line vice president of Sales and Marketing. "This is a sound and prudent planning step and is not due to any expectation that system emergencies are coming."

WHILE BPA BELIEVES IT ALREADY IS TAKING STEPS TO PREVENT SERIOUS ELECTRICITY INTERRUPTIONS THIS SUMMER, IT IS ALSO WORKING WITH ITS CUSTOMERS TODAY TO BOTH INFORM THEM OF ITS SYSTEM CAPABILITIES AND TO DEVELOP INDIVIDUAL LOAD DROPPING PLANS.

BPA is working with customers to identify how the agency and each of its customers could respond to a system emergency that would require dropping load. With planning, the region could control load dropping, which could minimize the impact to Northwest customers. This effort will also help to better understand the capability each utility has to drop load, how much they can drop and where.

This emergency load dropping activity is complementary to what a Northwest task force called the Energy Response Team is doing. Called Customer Pledged Response, that effort is seeking voluntary pledges from utilities to get load reduction from all of their customers. It could include voluntary conservation as well as curtailment of load.

"THIS IS A SOUND AND PRUDENT PLANNING STEP AND IS NOT DUE TO ANY EXPECTATION THAT SYSTEM EMERGENCIES ARE COMING."

CHUCK MEYER

TBL VICE PRESIDENT OF
SALES AND MARKETING.

"In this sense, BPA's load dropping plan is a backstop to the Energy Response Team plan, which is designed to prevent emergencies from becoming serious enough for load dropping to take place," Meyer said. "BPA's plan considers what happens next if preventive steps like the Customer Pledged Response are not successful or just aren't enough."

Today the transmission system is stressed. Although BPA is planning for immediate and short-term fixes, the TBL is planning for the long term to strengthen its transmission system where there is congestion and upgrading or adding lines to integrate new generation into the grid. While blackouts are unlikely, the odds of service interruptions this year are higher than they have been for some time. BPA thinks it is simply prudent to be prepared.

It is more difficult for Bonneville to be selective of the loads it drops than it is for California's system because BPA's system is different. Since BPA is limited in this capability it is looking to customers to pinpoint loads that can be dropped. It is Bonneville's

responsibility to prevent the collapse of the Northwest transmission grid and, if necessary, it would have to cut power deliveries to substantial geographic areas. The size and location of those areas would be determined only at the last minute by the nature of the crisis.

That is one of the reasons the agency wants to work with those customers that have the ability to conduct a more selective load dropping in their service areas. The goal is to develop a plan for responding to emergencies with an orderly and rational load dropping plan. BPA believes that can best be accomplished with the help of its customers.

THE GOAL IS TO MINIMIZE DISRUPTION TO THE GRID AS A WHOLE SO THAT THE OUTAGE CAN BE LIMITED AND THE GRID CAN BE BROUGHT BACK UP AS QUICKLY AS POSSIBLE.

At this point, BPA's criteria for loads to be dropped include:

- Where possible, avoid dropping lines connected to generation and major lines for moving power to where it is needed.
- Drop only lines that can easily be isolated from the system (otherwise there is automatic backfeed that would make the isolation ineffective).

"It does no good, for example, to open the breakers at a substation if the line dropped is part of a loop that can receive energy from a substation from the other end of the loop," Meyer said. "Each line dropped must be one that can be isolated from the rest of the system or it doesn't do any good."

The goal is to minimize disruption to the grid as a whole so that the outage can be limited and the grid can be brought back up as quickly as possible, he added.

continued on page 3

BPA prepares an emergency load dropping response

continued from page 2

BPA is in the process of talking with customers to develop a comprehensive approach to load dropping. Those discussions include BPA's system capabilities, criteria for dropping

load and how customers can help by identifying load that can be targeted. Customers should target non-critical loads and should inventory their loads to know how much they can drop, which loads can be dropped and how much time would be needed to implement the load dropping.

There is still a lot of work to do with customers. At this time the TBL is taking the lead on the emergency load dropping plan. Contact Kevin Ward, TBL Account Executive, at 360-418-8298, or by e-mail at kaward@bpa.gov, or Terry Doern, 360-418-2341, or by e-mail at tldoern@bpa.gov to find out more.

Business practices to change for 2002 tariff

October 1 marks the change to the Transmission Business Line's new Open Access Transmission Tariff and new transmission and ancillary services rates and with that change the TBL also must have in place new business practices. These practices guide how the TBL will conduct business with transmission customers during the 2002-2003 rate period.

Determining business practices is a fundamental activity when conducting any business. They outline business requirements, such as timelines and priorities for requesting and receiving service, and define transmission curtailment, emergency and reliability procedures.

"This is a very important step and one we are approaching with care," said Fran Gebhardt, Contracts Issues Manager with the TBL. "We are in the process now of putting together those practices and are asking customers to help us review the proposals."

That public review is in process now through the TBL's Open Access Same-Time Information System. To get the review process started, TBL posted a notice on OASIS March 16, 2001. "Use of Business Practices for Implementation of the Open Access Transmission Tariff" outlines how the review process will proceed and how customers can be involved.

The step-by-step procedure is simple, but crucial in order to develop meaningful business practices, Gebhardt said.

Before implementing a business practice, the TBL will post each proposed business practice on OASIS and give customers at least 10 business days to review and comment on that practice. A second posting, also on OASIS, will outline the comments and give TBL's responses. Following that step, TBL will either post another draft for comment along with TBL's response or it will post the final

DETERMINING BUSINESS PRACTICES IS A FUNDAMENTAL ACTIVITY WHEN CONDUCTING ANY BUSINESS. THEY DEFINE TRANSMISSION CURTAILMENT, EMERGENCY AND RELIABILITY PROCEDURES.

business practice. Future revisions to business practices will use the same public process, Gebhardt said.

A Feb. 12 posting asked customers to comment on sheltering hourly non-firm service under the transmission customer's unused firm capacity. Beginning Oct. 1, the TBL will change its practice to comply with Federal Energy Regulation Commission Order 638. That order requires customers to identify separately – at the time of a schedule submission – hourly non-firm schedules on a secondary path that the customer intends to shelter under unused firm reserved capacity from hourly non-firm schedules on primary paths.

Also on Feb. 12, TBL posted a discussion of remote resources and remote loads for customer review and comment. A remote resource is one that does not have a direct physical interconnection with the transmission customer's main system but is telemetered into the customer's Control Area.

Scheduling procedures were discussed in another Feb. 12 posting. Significant changes are planned for scheduling.

A Feb. 21 posting discusses changes in generation imbalance services, which enable the TBL to maintain load resource balance. This posting discusses how deviations outside a certain band will be settled based on the hourly energy index price as required in the TBL's 2002-03 tariff and other issues regarding these services.

While the period to comment has closed for these issues, others will occur as the TBL reviews business practice changes required by its 2002-03 tariffs. In fact, during May, the TBL posted a total of 25 business practice changes on OASIS for public comment. TBL recently consolidated using an upgraded application program all business practices that will go into effect on Oct. 1, 2001 at the OASIS web site. To find this information on the Internet, go to <http://www.transmission.bpa.gov/OASIS/BPAT>.

FERC offers RTO guidance

The Federal Energy Regulatory Commission issued an April 26 Order responding to filings submitted in October 2000 by RTO West Filing Utilities. The Order accepted some parts of the "Stage 1" filings that described key elements for a proposed regional transmission organization, while giving guidance on other areas. FERC's direction will help guide RTO West Filing Utilities' next steps.

The Order also accepted portions of a proposal by six utilities to create an independent transmission company, known as TransConnect, within the RTO Structure, by six of the Filing Utilities. Filing Utilities are Avista Corp., the Bonneville Power Administration, Idaho Power Co., the Montana Power Co., PacifiCorp, Portland General Electric Co., Puget Sound Energy, Inc., Nevada Power Co., and Sierra Pacific Power Co. ITC utilities consist of Avista, Montana Power, Nevada, PGE, Puget, and Sierra Pacific.

"FERC's Order appropriately focused on a few key areas," said Peggy Olds, the Transmission Business

Line's RTO project manager. "It gives needed guidance on governance, liability, and scope and configuration of the RTO, along with some feedback on other areas."

In the short run, she said, the Order gives the Filing Utilities enough information to redirect their Stage 2 work plans and milestones. Filing Utilities are taking all factors under consideration to determine next steps for making filings with FERC, including a request that the Filing Utilities submit a status report by December 1 on certain items.

FERC said in its Order that the RTO West governance proposal met the independence criteria established in Order 2000, and it gave direction for minor modifications to its bylaws.

With respect to liability, FERC rejected the Stage 1 proposal. FERC found that the pro forma tariff does

"FERC'S ORDER GIVES NEEDED GUIDANCE ON GOVERNANCE, LIABILITY, AND SCOPE AND CONFIGURATION OF THE RTO, ALONG WITH SOME FEEDBACK ON OTHER AREAS."

PEGGY OLDS

TBL'S RTO PROJECT MGR.

not and is not intended to address liability issues. Transmission providers, then, are free to rely on state laws for protection from negligence claims. Filing Utilities will first seek guidance from FERC on approaches to addressing liability, and then continue work to develop an acceptable approach.

FERC concluded that TransConnect, as a participating transmission owner independent of market participants, could file for incentive or performance based rates, consistent with the RTO West Tariff rate design. The ability to make such rate filings was limited to independent transmission owners and would not apply to other participating transmission owners.

The Order also said that the scope

and regional configuration proposed by RTO West are consistent with Order 2000 and further directed Filing Utilities "to continue working toward the common goals of minimizing seams issues, improving inter-regional coordination, and ultimately establishing a single West-wide RTO." The Order referred several times to forming a West-wide RTO. FERC also noted recent comments sent to the Commission by Secretary of Energy Spencer Abraham supporting seamless electricity markets as "the best way to achieve the balance between a healthy Western electricity market and regional reliability needs is to create a strong, regional RTO..."

"RTO West filing utilities support the development of RTOs in the west that address specific regional needs," Olds said. "We're committed to developing an effective West-wide market, but with thoughtful first steps."

She said that RTO West has made significant progress on interregional coordination and will continue working with its neighbors — Desert Star, California ISO and Canadian utilities. FERC further stated that it expects "RTO West (as well as participants in other RTO efforts under consideration in the West) to work cooperatively with the California ISO to develop comprehensive solutions to the problems confronting western markets."

Items the Filing Utilities must file a status report by Dec. 1 are, among other things:

- Resolution of seams issues (how RTO West will address technical and business issues with neighboring RTOs),
- Plans for participation in RTO West by Canadian entities;
- A framework for formation of a West-wide RTO;
- A timetable for achieving a West-wide RTO end state.

The process is public and ongoing. The best way to keep up and to view the filing documents is to log onto the Internet and point your browser to www.rtowest.org.

ACCESS is produced bi-monthly for the Bonneville Power Administration Transmission Business Line.

Send your letters and comments to your account executive or to "Access: Letters to the Editor," Bonneville Power Administration, Transmission Business Line — Attn: Linda Harris, TMP-Dittz, P.O. Box 491, Vancouver, WA 98666; e-mail: lharris@bpa.gov

Congested paths scrutinized

Load growth and thousands of megawatts of new power plants due to come on line have the Transmission Business Line closely watching internal transmission paths for signs of new congestion. In its studies, the TBL is finding chunks of the transmission system that could potentially become choked and that may need limits placed on the amount of flow over some paths.

"WE'RE IN A NEW WORLD WHERE THERE ARE A LOT MORE PLAYERS WITH MULTIPLE TRANSACTIONS WHEELING ACROSS OUR GRID."

JOHN ANASIS, TBL

When use on a path approaches or exceeds its transfer capability limits, the TBL is required by the Federal Energy Regulatory Commission to post and monitor the path on its Open Access Same Time Information System. Earlier this year, the transmission agency found those conditions on its Cross Cascades North path serving Puget Sound and posted that path on OASIS.

This could be only one of several paths that would be posted over the next several years as developers build new power plants that need to be integrated into the grid to serve the Northwest's growing loads. Those paths could remain in place until the TBL can complete its infrastructure projects, planned for completion in 2006 that will relieve much of the region's transmission congestion.

"We're in a new world where there are a lot more players with multiple transactions wheeling across our grid," said John Anasis of the TBL. "We're in a changing marketplace environment where the wholesale marketing of

energy has created a fast-moving market for firm capacity."

Anasis said that the transactions are stacking up and putting pressure on the TBL's transfer capability along some paths. The generation additions that will soon come on line will further complicate those transactions. Because they are placed along major natural gas pipelines, they tend to be concentrated in limited areas, like the generators going in near Hermiston, and that puts more pressure on lines that feed the large markets to the west. Also, more stringent transfer capability limits were placed on the transmission system after an August 1996 disturbance that affected the entire West Coast.

"Now we have to begin to recognize that what we are selling is in limited supply," Anasis said. "The more we post, the more likely a customer would be traversing more than one congested path from source to sink."

Traditionally, limits have been placed at major transfer points, like a control area boundary. Those are much easier to control than internal constraints, Anasis said. When the constraint is internal it doesn't have a clean boundary with other control areas and that has the TBL going to a flow-based paradigm for managing those internal constraints.

According to Brian Silverstein, Market Mechanism Project Manager for the TBL, a flow-based model tries to manage commercial arrangements on the transmission system in a way that electricity naturally flows over lines - obeying the laws of physics - rather than by contract paths. There is always a mismatch between how electricity flows naturally and how people transact business, he said. Silverstein is negotiating on behalf of the Bonneville Power Administration in RTO West discussions on managing congested paths.

"Some utilities have been managing the commercial side through a contract path approach, but the

system constraints point out the need to recognize the paths that the power actually follows," he said. "The RTO will designate a handful of paths that will have to be managed. The work that John Anasis is doing is laying the groundwork for what will happen in the RTO. People sometimes assume that what we are planning with the RTO is a radical change, but it's simply the next logical step."

The difference between contract path schedules and how the power actually flows is called loop flow. Electrons can't read contracts, but FERC requires RTOs to address parallel path flows, Silverstein said.

Customers will see a difference as certain internal paths are posted, according to Anasis. To start with, the customer will have to make sure that there is available transmission capacity across each path and that makes each transaction more complicated. At the same time, the TBL will have to manage reductions in ATC across each path and devise more detailed curtailment features. That adds a definite degree of complexity in managing and moving energy across the TBL system, Anasis said.

"The key to managing this for both customers and for the TBL is to automate the process and give both the ability to look at ATC across all impacted flowgates," Anasis said. The Transmission Capacity Automation Project that will be on-line by October 1 devises "what-if" scenarios at the flowgates and allows a check on how things look without having to submit a schedule.

Anyone who uses the grid needs to know about how congested paths could affect their scheduling, Anasis said. That includes customers, marketers and resource developers.

More information about TBL congested paths is available on the Internet. Go to <http://www.transmission.bpa.gov/OASIS/BPAT> and click on "Path Constraints."

ETMS depends on accurate e-tags

Automation tools to enable Bonneville Power Administration Transmission Business Line (TBL) to administer the requirements for the 2002-03 rates and tariff will begin to be deployed prior to October 1. As the TBL transitions from its current real-time operations dispatch and scheduling system to the new Electricity Transaction Management System™ (ETMS), electronic tagging will become integrated with the transmission customer's request for use of transmission capacity. The benefits for customers and the TBL can be large. When fully transitioned, the new system will enable all parties to schedule with the TBL electronically and it will give customers the ability to verify and automatically accept approved schedules.

TBL contracted with SoftSmiths in July 1999 to provide the basic ETMS system and to engineer a number of modifications that expands TBL's capabilities and makes it easier for customers to complete all their reservation and scheduling transactions on the Internet. At TBL, all OASIS reservations are currently administered through ETMS.

The Western Systems Coordinating Council successfully implemented E-tagging for pre-schedules in April 2000 and has targeted June 1 of this year to take the next step and use electronic tags with real time schedules. "The heart and soul of the new technology is E-tagging," Bob Ellingwood, TBL project manager for transmission scheduling systems. "We know there still are some problems associated with the quality of information we get from E-tags. Although E-Tags generally pass NERC validation test, E-Tag data required for schedule association is generally inaccurate. An inaccurate tag could result in a denial for transmission service and energy not flowing."

Considering the magnitude of this problem, the TBL is not denying transmission schedule requests solely based upon the authorship quality of the E-tag. The success of the new scheduling system will depend on the accuracy of each E-tag, Ellingwood said.

To correct whatever problems still exist, the TBL along with the WSCC is actively involved in an effort to standardize the content of E-tag data and rules of conduct. Ellingwood said TBL is dependent on the decisions and actions of TBL's regional customer base for ETMS's success.

The region still needs to make some key business decisions, according to Ellingwood. One of those is the standardization of service points, such as points of receipt (POR) and points of delivery (POD). The acceptance of the service point list is still open at WSCC, something that needs to be settled. Additionally, the region needs to address timing relationships between schedule submittals and E-Tag submittals. In consideration of these concerns, the region has decided to defer acceptance of the no tag/no flow policy for real time scheduling until after the next release of E-tag version 1.7.

"E-tagging must be successful to fully implement the new ETMS, and that includes the quality of the E-tag as well as the ability to validate the tag," Ellingwood said. "It's rudimentary!"

Given the uncertainty of the quality of E-tag authorship, in the near term it is highly unlikely that the E-tag can be correctly associated with a transmission schedule using the current expectation for achieving correct use of E-tags. Recognizing the deficiency in the accuracy of the data represented on the E-tag, the TBL has begun to pursue alternate methods for automatically validating transmission schedule requests, yet still being able to associate the E-tag to transmission schedules.

The TBL also recognizes that customers will be going through changes

with the new system, too, and is developing training products and working closely with each customer to make the transition a success.

"The degree of change a customer may experience will vary on the numbers of contracts and the business volume they contract with us daily. But, before we make the full conversion, we'll provide sufficient advance notice and identify what may be different in the business interface and timeline for implementation," Ellingwood said.

The North American Electric Reliability Council developed E-tags in response to changes in the way the transmission grid is being used as the electric industry restructures. Before deregulation, power flowed from generator to user with few changes in ownership. Today, power marketers may buy, sell and resell a single transaction many times. E-tags assure that all parties can be identified immediately and that responsibilities are clear.

E-tag information provides a definition of the transaction path by including source control area, sink control area, intermediate control area, transmission provider and the product (firm or degree of non-firm). The contract number or BPA OASIS number, which identifies the customer's right to use the transmission system, is also part of an E-tag. Another key component is the energy profile of a transaction, which identifies the energy intended to be moved across a transmission path over a designated time.

The TBL processed over 26,000 e-tagged transactions in March and April, a record number that is exponentially greater than December's 10,000 transactions and 5,000 transactions only a few months before.

"We're faced with a huge volume of transactions and there is no way to do them manually," Ellingwood said. "We can only handle this volume through automation and that again underscores the need for accuracy."

Summer Projects

continued from page 1

(Coyote Springs No. 2 LLC developer) project and CalPine's 536 MW HHP Hermiston project, which is due on line early next year, but will need start-up power this fall. Both are at Boardman, Ore. That is why much of the work for these projects and for relieving congestion in eastern Oregon and Washington will be done at the Bonneville Power Administration's Coyote Springs and McNary Substations.

"McNARY HAS BEEN A KEY SUBSTATION FOR A LONG TIME. AND, IT'S BECOMING MORE IMPORTANT AS WE CONNECT GENERATION AND SOLVE CONGESTION PROBLEMS. GROWTH IN THE ELECTRICITY MARKETS TO THE WEST ARE CAUSING A LOT OF CONSTRUCTION AT McNARY.."

DWIGHT RAIKOGLO
TBL CONSTRUCTION
SERVICES MANAGER

"McNary has been a key substation for a long time," Raikoglo said. "And, it's becoming more important as we connect generation and solve congestion problems. Growth in the electricity markets to the west are causing a lot of construction at McNary."

Whatever work the crews can complete at the substation this summer will avoid generation being taken off line to hook up additional lines in and out of McNary, Raikoglo added.

Still other work at McNary is designed to relieve the transmission bottleneck towards the westside markets and to prepare for a new 500 kV line from McNary to John Day. While the preparation work for that project is being done this summer, the 70 miles of line won't be completed until 2004.

continued on page 8



Summer Projects

continued from page 7

Work this summer at BPA's South Tacoma Substation is intended to integrate the 270 MW Fredrickson II generator being developed by West Coast Energy. That will go commercial in 2003. While TBL construction

"WE HAVE A LOT OF WORK TO FINISH THIS SUMMER AS WE PREPARE FOR SOME OF THE LARGER PROJECTS THAT ARE TO BEGIN IN THE NEXT FISCAL YEAR."

DWIGHT RAIKOGLO

crews will make the final connection for that project, a contractor will begin civil work and do a good portion of the electrical work this summer. Without the contractor, the work simply couldn't get done on time, Raikoglo said.

On a very tight timeframe is the 180 MW turbine owned by GNA Energy that will go in at Goldendale, Wash. late this fall to service the GoldenWest aluminum plant. The generator is being built right next to the substation, but the facility will need two extra bays to handle the new load and those must be in place before the end of summer.

Still other projects are designed to relieve congestion that either exists now or the TBL anticipates will exist once the thousands of megawatts of new generation come on line over the next five years. One designed to relieve congestion that exists now in fast-growing northern Puget Sound is the Kangley to Echo Lake 500 kV line project. Construction for the nine miles of transmission line begins as soon as the environmental process is complete and is scheduled for completion by November 2002.

Finally, some projects upgrade or reinforce substations and lines. TBL

line crews are rebuilding portions of the Benton-Franklin line in Washington's Tri-Cities for a higher capacity and associated with that is the new 115 kV Red Mountain Substation. That project broke ground in April.

Crews changed out all the 500 kV breakers at the Ashe Substation near Hanford six weeks ahead of schedule and are beginning to add 230 kV capacitors at the substation to provide additional voltage support.

"These are only a few of the construction projects that will keep TBL construction crews busy this summer," Raikoglo said. "We're looking forward to a busy season, but realize that with the infrastructure projects that lay ahead of us, this is only the first of many busy summers."

Bonneville Power Administration
P.O. Box 3621 Portland, Oregon 97208-3621
DOE/BP-3384 March 2001 1M



UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
P.O. Box 3621
Portland, OR 97208
OFFICIAL BUSINESS

FIRST — CLASS MAIL
U.S. POSTAGE PAID
MAILED FROM ZIP CODE 97208
PERMIT NO. 2462